

Science GE DOK Alignment Chart

EARTH/SPACE SCIENCE

Grades 3-4

GE 44-46

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
Enduring Knowledge: The universe, earth and all earth systems have undergone change in the past, continue to change in the present and are predicted to continue changing in the future.			
DOK 2	S3-4:44 (DOK 2) Students demonstrate their understanding Characteristics of the Solar System by... · Creating a model of the planets and their correct order from the sun. AND · Drawing or building and then explaining a model of the earth rotating on its axis in relation to the sun and moon (i.e., day and night).	Science Concepts: a. The earth is one of several planets that orbit the sun, and the moon orbits the earth . b. Like all planets and stars, the earth is approximately spherical in shape. The rotation of the earth on its axis every 24 hours produces the night and day cycle.	
DOK 2	S3-4:45 (DOK 2) Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by... · Identifying similar star patterns or groups from night photographs of the same location at different times of the years. AND · Comparing similarities and differences between the sun and stars.	Science Concepts: a. Stars are like the sun, but so far away that they look like points of light. Some are smaller; some are larger than the sun. b. The patterns of the stars stay the same, although they appear to move across the sky.	
DOK 2 ESS1(K-4)INQ-1 DOK 1 DOK 2 ESS1(K-4)INQ-1	S3-4:46 (DOK 2) Students demonstrate their understanding of Processes and Change over Time within Earth Systems by... · Observing, identifying and comparing components of soils and rocks. AND · Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases). AND · Observing and comparing the properties of rocks.	Science Concepts: a. Soil is made partly from rock, partly from plant remains and also contains many living organisms. b. Earth materials are solid rocks, soils, water and the gases of the atmosphere. c. Rock is composed of different combinations of minerals. Large rocks can be broken down into small rocks. d. Rocks have properties of color, texture and hardness. Rocks can be classified by their physical properties .	

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DOK 3 ESS1(K-4)INQ-2 ESS1(K-4)INQ + SAE-4 DOK 3 ESS1(K-4)INQ-2 2	S3-4:47 (DOK 3) Students demonstrate their understanding of Processes and Change over Time within Earth Systems by... · Investigating how local landforms are affected by wind, water or ice, and using results from the investigation to draw conclusions about how water interacts with earth materials . AND · Building models that simulate deposits of sediments (e.g., a stream table). AND · Comparing local landforms with models created in the classroom.	Science Concepts: a. Waves, wind, water and ice shape and reshape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas.	
DOK 2 ESS1(K-4)NOS-3 DOK 2 PS2(K-4)INQ + SAE-6 DOK 2 ESS1(K-4)POC-5	S3-4:48 (DOK 2) Students demonstrate their understanding of Processes and Change over Time within Earth Systems by... · Observing, recording and analyzing local weather data and making predictions based on that data . AND · Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled. AND · Explaining how this cycle of water relates to weather and the formation of clouds .	Science Concepts: a. Weather changes from day to day and over the seasons. Weather can be described by measurable quantities (such as temperature, wind direction and speed, precipitation and air pressure). b. Air is a substance that surrounds us, takes up space and whose movement we feel as wind. c. Liquid water is changed by heat from the sun to gas (vapor) and returns to a liquid or solid state when cooled to the freezing point. d. Clouds and fog are made of small drops of water.	
DOK 1 PS1(K-4)INQ-1 DOK 2	S3-4:49 (DOK 2) Students demonstrate their understanding of Processes and Change within Natural Resources by... · Observing and describing properties of living and nonliving resources. AND · Explaining how the properties of living and non-living resources make them suitable for use by humans .	Science Concepts: a. The varied earth materials have different physical and chemical properties which make them useful in different ways, for example, as building materials, as sources of fuel, for growing the plants we use as food, or supporting animal life. Earth materials provide many of the resources that humans use. b. Earth materials have chemical and physical properties that make them useful as building materials, for growing plants, or for fuel.	